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ABSTRACT

The United States Training and Employment Service General Aptitude Test Battery (GATB), first published in 1947, has been included in a continuing program of research to validate the tests against success in many different occupations. The GATB consists of 12 tests which measure nine aptitudes: General Learning Ability; Verbal Aptitude; Numerical Aptitude; Spatial Aptitude; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, and a standard deviation of 20. Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, when combined, predict job performance. Cutting scores are set only for those aptitudes which aid in predicting the performance of the job duties of the experimental sample. The GATB norms described are appropriate only for jobs with content similar to that shown in the job description presented in this report. A description of the validation sample is also included. (RC)

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Technical Report on Development of USES Aptitude Test Battery

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For

Clerk, General Office (clerical) 219.388

S-329R74

Developed in Cooperation with the
Alaska, Arizona, California, Colorado, Florida, Illinois, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Nevada, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, West Virginia, and Wisconsin State Employment Services

U. S. DEPARTMENT OF LABOR
Peter J. Brennan, Secretary

Manpower Administration
William H. Kolberg
Assistant Secretary for Manpower

December 1974

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Development of USES Specific Aptitude Test Battery S-320R74

For

Clerk, General Office (clerical) 219.388

RESEARCH SUMMARY

This report describes the research which resulted in the development of the following Specific Aptitude Test Battery for use in selecting inexperienced or untrained individuals for training as General Office Clerks:

Aptitudes	Cutting Scores
G - General Learning Ability	90
N - Numerical Aptitude	95
Q - Clerical Perception	110

Sample:
Validation sample: 407 General Office Clerks (388 females and 19 males) from the North, South and West (see Appendix 2). A total of 182 were minority group members (130 Blacks, 27 Spanish Surnamed, 18 American Indians, 3 Orientals and 4 French Canadians) and 225 were nonminority group members.

Cross-validation sample #1: 103 General Office Clerks (94 females and 9 males) from the North (see Appendix 2). This study was conducted prior to the requirement of providing minority group information. Therefore, minority group status of sample members is unknown.

Cross-validation sample #2: 89 MDTA General Office Clerk trainees (88 females and 1 male) from the North (see Appendix 2). A total of 5 were minority group members (4 Blacks and 1 Oriental) and 84 were nonminority group members.

Criterion:
Validation sample: Supervisory ratings. Criterion data were collected during 1972, 1973 and 1974.

Cross-validation sample #1: Supervisory ratings. Criterion data were collected during 1958 and 1961.

Cross-validation sample #2: Multiple hurdle of broad category supervisory ratings and combined speed and error typing scores. Criterion data were collected during 1968 and 1969.

Design:
Validation sample: Concurrent (test and criterion data were collected at about the same time).

Cross-validation sample #1: Concurrent.

Cross-validation sample #2: Longitudinal (tests were administered at the beginning of the MDTA training course; criterion data were obtained six months later after completion of the training).

Validity:
Validation Sample:
Phi coefficient for total sample = .31 ($P/2 < .0005$)
Phi coefficient for Black subsample = .29 ($P/2 < .0005$)
Phi coefficient for nonminority subsample = .28 ($P/2 < .0005$)

Cross-validation sample #1:
Phi coefficient for total sample = .24 ($P/2 < .01$)

Cross-validation sample #2:
Phi coefficient for total sample = .41 ($P/2 < .0005$)

Effectiveness of Battery for Validation Sample:
For the total validation sample, 65% of the sample were in the high criterion group; if they had been test-selected with this battery, 78% would have been in the high criterion group; 35% of the sample were in the low criterion group; if they had been test-selected with this battery, 22% would have been in the low criterion group. The effectiveness of the battery is shown in Table 1.

TABLE 1

Effectiveness of Battery for Validation Sample

	Without Tests	With Tests
High Criterion Group	65%	78%
Low Criterion Group	35%	22%

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Comparison of Minority and Nonminority Groups:
No differential validity for this battery was found. The difference between the phi coefficients for Black and nonminority subgroups of the validation sample is not statistically significant (CR = .09). The battery is fair to Blacks since the proportion of Blacks who met the cutting scores approximated the proportion who were in the high criterion group. 37% of the Blacks met the cutting scores and 48% were in the high criterion group.

JOB ANALYSIS

A job analysis was performed by observation of the workers' performance on the job and in consultation with the workers' supervisors. On the basis of the job analysis, the job description shown in Appendix 4 was prepared, which was used to (1) select an experimental sample of individuals who were performing or being trained for the job; (2) choose an appropriate criterion or measure of job performance; (3) determine which aptitudes are critical, important or irrelevant to job performance (see Tables 2 and 5); and (4) provide information on the applicability of the test battery resulting from this research.

TABLE 2

Qualitative Analysis

Aptitude	Rationale
G - General Learning Ability	Required in understanding oral and written instructions and in learning and performing the various duties of the job.
V - Verbal Aptitude	Required in understanding the meaning and relationship of words and sentences.
N - Numerical Aptitude	Required in performing computational duties.
Q - Clerical Perception	Required in checking work for errors, in reading and recording numbers and names, in filing letters, in preparing records and reports, and in posting data.
K - Motor Coordination	Required in filing and sorting and in performing various office machine operations.
F - Finger Dexterity	Required in operating office machinery such as typewriter, calculator and adding machines.

EXPERIMENTAL TEST BATTERY

Validation sample:
All 12 tests of the GATB, B-1002B.

Cross-validation Sample #1:
All 12 tests of the GATB, B-1002A.

Cross-validation Sample #2:
All 12 tests of the GATB, B-1002B.

CRITERION

Validation Sample:
The immediate supervisor rated each worker. The ratings were obtained by means of personal visits of State test development analysts who explained the rating procedure to the supervisors. Two ratings were obtained from each supervisor with an interval of two weeks between the ratings. Since sample members' test scores are confidential, supervisors had no knowledge of the test scores of the workers.

A descriptive rating scale was used. The scale (see Appendix 3) consists of six performance items. Five of these items cover different aspects of job performance. The sixth item is a global item on the General Office Clerk's "all-around" ability. Each item has five alternative responses corresponding to different degrees of job proficiency. For the purpose of scoring the items, weights of 1 to 5 were assigned to the responses. The total score on the rating scale is the sum of the weights for the six items. The possible range is 6-30.

A review of the job description indicated that the subjects covered by the rating scale were directly related to important aspects of job performance.

A - Amount of work: Work must be performed at a satisfactory pace to avoid backlog of projects.

B - Quality of work: Letters, bills, statements and other materials must be neat and legible in order to be acceptable.

C - Accuracy of work: Computations, filing, posting, etc., must be accurate in order to be acceptable.

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D - Amount of knowledge: General Office Clerk must have knowledge of grammar, arithmetic and office machine operation in order to perform the job duties satisfactorily.

E - Variety of job duties: General Office Clerk should be able to handle a large variety of tasks without specific instruction.

F - "All-around" ability: General Office Clerk's value to employer involves a combination of the aspects of job performance listed above.

A reliability coefficient of .86 was obtained between the initial ratings and the re-ratings, indicating a significant relationship. The final criterion score consists of the combined scores of the two ratings. The possible range is 12-60. The mean score on the final criterion was 41.9 with a standard deviation of 7.8. The relationship between the criterion and age, education and job experience is shown in Table 3.

TABLE 3

Validation Sample

Means, Standard Deviations (SD) and Pearson Product-Moment Correlations with the Criterion (r) for Age, Education and Experience

	Mean	SD	r
Age (years)	20.4	9.0	.124*
Education (years)	12.4	1.1	.097*
Experience (months on current job)	29.7	38.0	.237**

*Significant at the .05 level
**Significant at the .01 level

About one-third of the workers are considered to be marginal workers. Therefore, the criterion distribution was dichotomized so as to include about one-third of the sample in the low criterion group and the remainder in the high criterion group. The criterion cutting score was set at 39 which places 35% in the low criterion group and 65% in the high criterion group.

Cross-validation Sample #1:

One performance rating was obtained from the immediate supervisor of each worker. Since sample members' test scores are confidential, supervisors had no knowledge of the test scores of the workers.

A descriptive rating scale was used. The scale (see Appendix 3) consists of nine items. Eight of these items cover different aspects of job performance. The ninth item is a global item on the General Office Clerk's "all-around" ability. Each item has five alternative responses corresponding to different degrees of job proficiency. For the purpose of scoring the items, weights of 1 to 5 were assigned to the responses. The total score on the rating scale is the sum of the weights for the nine items.

A review of the job description indicated that the subjects covered by the rating scale were directly related to important aspects of job performance.

A - Amount of work: Work must be performed at a satisfactory pace to avoid a backlog of projects.

B - Quality of work: Letters, bills, statements and other materials must be neat and legible in order to be acceptable.

C - Accuracy of work: Computations, filing, posting, etc., must be accurate in order to be acceptable.

D - Knowledge of job: General Office Clerk must have specific knowledge of office procedures and machines.

E - Facility for work: General Office Clerk should be able to apply knowledge of principles and procedures to specific situations in order to produce satisfactory work.

F - Variety of job duties: General Office Clerk must be able to handle a large variety of tasks without specific instruction.

G - Resourcefulness: General Office Clerk should be able to apply knowledge to new situations and act accordingly.

H - Suggestions for improvement: General Office Clerk should be able to notice ways to improve office procedures.

I - "All-around" ability: General Office Clerk's value to the employer involves a combination of the aspects of job performance listed above.

Since only one rating was obtained, the estimated reliability of the criterion was determined by obtaining the relationship between the total descriptive rating scale scores and the rating on item I ("All-around" ability) of the scale. A reliability coefficient of .91 was obtained. The possible range for the final criterion is 9-45. The actual range is 17-45 with a mean of 32.2 and a standard deviation of 6.3. The relationship between the criterion and age, education and job experience is shown in Table 3a.

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TABLE 3a

Cross-validation Sample #1

Means, Standard Deviations (SD) and Pearson Product-Moment Correlations with the Criterion (r) for Age, Education and Experience

	Mean	SD	r
Age (years)	29.7	10.5	.425**
Education (years)	12.0	.8	.008
Experience (months)	61.4	74.5	.344**

**Significant at the .01 level

About one-third of the workers are considered to be marginal workers. Therefore the criterion distribution was dichotomized so as to include about one-third of the sample in the low criterion group and the remainder in the high criterion group. The criterion cutting score was set at 30 which places 37% in the low criterion group and 63% in the high criterion group.

Cross-validation Sample #2:
Two criterion measures were obtained; one consisted of broad category instructor ratings and the other consisted of combined speed and error typing test scores.

Each instructor was asked to place the class in a rank order by overall classroom performance. The instructor then divided this rank order into five broad categories as follows: not acceptable, somewhat inferior, generally acceptable, usually superior, and almost always top notch. This allowed data from the different instructors to be combined. Trainees who were placed in the "below average" groups were considered to be in the low criterion group. 28% of the sample was considered "below average".

The second criterion was words-per-minute adjusted for errors on the USES typing test administered during the final month of training. Discussions with Employment Service local office personnel indicated that 35 words-per-minute was required of an applicant to afford a reasonable expectation of being hired after referral. Thus, 35 words-per-minute was set as the cutting score for this criterion measure. This placed 43% of the sample in the low criterion group.

A correlation coefficient of .72 was obtained between the two criterion measures. A multiple-hurdle technique was used. The trainees had to be in the high criterion group on each criterion in order to be placed in the final high criterion group. 51% of the sample was placed in the high criterion group. The relationship between the criterion measures and age and education is shown in Table 3b.

TABLE 3b

Cross-validation Sample #2

Means, Standard Deviations (SD) and Pearson Product-Moment Correlations with Criteria 1 (r_1) and 2 (r_2) for Age and Education

	Mean	SD	r_1**	r_2
Age (years)	29.3	11.2	.040	-.132
Education (years)	11.5	1.2	.261*	.198

*Significant at the .05 level

**Corrected for criterion variable expressed in broad categories

SAMPLE

Validation Sample:
The validation sample consisted of 407 General Office Clerks (388 females and 19 males) employed at various companies in the North, South and West (see Appendix 2). A total of 182 were minority group members (130 Blacks, 27 Spanish Surnamed, 18 American Indians, 3 Orientals and 4 French Canadians) and 225 were nonminority group members. The means and standard deviations for age, education and experience of validation sample members are shown in Table 3. Some employers used proficiency tests for selection but no aptitude tests were used. All workers had at least two months total job experience in jobs whose duties are similar to those found in the job description in Appendix 4. Descriptive statistics for subgroups are shown in Appendix 1.

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Cross-validation Sample #1:
The cross-validation sample #1 consisted of 103 General Office Clerks (94 females and 9 males) employed by various companies in the North (see Appendix 2). This study was conducted prior to the requirement of providing minority group information on sample members; therefore, minority group information is not known. No sample members were test-selected. The means and standard deviations for age, education and experience of sample members are shown in Table 3a. All workers had at least 3 months total job experience in jobs with duties similar to those shown in the job description in Appendix 4.

Cross-validation Sample #2:
The cross-validation sample #2 consisted of 89 MDTA General Office Clerk trainees (88 females and 1 male) enrolled at various training facilities in the North (see Appendix 2). A total of five were minority group members (4 Blacks and one Oriental) and 84 were nonminority group members. Means and standard deviations for age and education of sample members are shown in Table 3b. No sample members were test-selected. All sample members were receiving training in preparation for jobs with duties similar to those shown in Appendix 4.

STATISTICAL RESULTS

TABLE 4

Statistical Results for Validation Sample

N=407

Aptitude	Mean	SD	r
G - General Learning Ability	100.2	14.9	.358**
V - Verbal Aptitude	102.2	13.6	.310**
N - Numerical Aptitude	102.2	16.0	.344**
S - Spatial Aptitude	99.9	16.8	.130**
P - Form Perception	116.4	19.4	.224**
Q - Clerical Perception	124.5	17.0	.247**
K - Motor Coordination	115.5	17.5	.153**
F - Finger Dexterity	102.7	21.4	.129**
M - Manual Dexterity	101.0	23.0	.186**

** Significant at the .01 level

Table 5 summarizes the qualitative analysis and statistical results shown in Tables 2 and 4 and shows the aptitudes considered for inclusion in the battery.

TABLE 5

Summary of Qualitative and Quantitative Data for Validation Sample

	Aptitudes								
Type of Evidence	G	V	N	S	P	Q	K	F	M
"Critical" on Basis of Job Analysis									
"Important" on Basis of Job Analysis	X	X	X			X	X	X	
"Irrelevant" on Basis of Job Analysis									
Relatively High Mean					X	X	X		
Relatively Low Standard Deviation	X	X							
Significant Correlation with Criterion	X	X	X	X	X	X	X	X	X
Aptitudes Considered for Inclusion in the Battery	G	V	N	S	P	Q	K	F	M

The information in Table 5 indicates that the following aptitudes should be considered for inclusion in the battery: G, V, N, S, P, Q, K, F and M. The objective is to develop a battery of 2, 3 or 4 aptitudes with cutting scores set at five point intervals at the point (a) where about the same percent will meet the cutting scores as the percent placed in the high criterion group and (b) which will maximize the relationship between the battery and the criterion. The cutting scores are set at approximately one standard deviation below the mean aptitude scores of the sample, with deviations above or below these points to achieve the objectives indicated above.

The following battery resulted:

Aptitudes	Cutting Scores
G - General Learning Ability	90
N - Numerical Aptitude	95
Q - Clerical Perception	110

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VALIDITY OF THE BATTERY

TABLE 6
Validity of Battery for Total Validation Sample

	Below Cutting Scores	Meeting Cutting Scores	Total
High Criterion Group	90	174	264
Low Criterion Group	95	48	143
Total	185	222	407

Phi coefficient = .31
Significance level = P/2 < .0005

TABLE 6a
Validity of Battery for Black Validation Subsample

	Below Cutting Scores	Meeting Cutting Scores	Total
High Criterion Group	30	32	62
Low Criterion Group	52	16	68
Total	82	48	130

Phi coefficient = .29
Significance level = P/2 < .0005

TABLE 6b
Validity of Battery for Nonminority Validation Subsample

	Below Cutting Scores	Meeting Cutting Scores	Total
High Criterion Group	44	123	167
Low Criterion Group	33	25	58
Total	77	148	225

Phi coefficient = .28
Significance level = P/2 < .0005

TABLE 7
Validity of Battery for Cross-validation Sample #1

	Below Cutting Scores	Meeting Cutting Scores	Total
High Criterion Group	23	42	65
Low Criterion Group	23	15	38
Total	46	57	103

Phi coefficient = .24
Significance level = P/2 < .01

TABLE 8
Validity of Battery for Cross-validation Sample #2

	Below Cutting Scores	Meeting Cutting Scores	Total
High Criterion Group	7	38	45
Low Criterion Group	24	20	44
Total	31	58	89

Phi coefficient = .41
Significance level = P/2 < .0005

OCCUPATIONAL APTITUDE PATTERN

This occupation was incorporated into OAP-17 in Section II of the 1970 edition of the Manual for the USES General Aptitude Test Battery as a "double asterisk" (**), because Aptitude V is not contained in the battery but a significant phi coefficient was obtained between the criterion and the OAP-17 norms of G-90, V-90 and Q-100. A phi coefficient of .20 (P/2 < .0005) was obtained for the Validation sample data. The Cross-validation Sample #1 phi coefficient was .28 (P/2 < .005); Cross-validation Sample #2 phi coefficient was .15 (P/2 < .10).

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APPENDIX 1

Descriptive Statistics for Black and Nonminority Subgroups of Validation Sample

	Black (N=130)			Nonminority (N=225)		
Variable	Mean	SD	Range	Mean	SD	Range
Aptitude G	92.5	12.4	58-130	105.3	14.1	70-138
Aptitude V	96.3	11.3	74-130	106.1	13.4	74-147
Aptitude N	96.1	14.6	58-138	106.6	15.4	64-140
Aptitude S	95.8	14.8	65-133	102.0	17.0	65-143
Aptitude P	111.3	18.3	65-165	119.5	19.8	69-167
Aptitude Q	122.9	16.6	90-176	126.4	17.1	86-190
Aptitude K	117.3	18.1	80-159	114.3	16.0	70-155
Aptitude F	99.7	19.1	47-148	103.6	22.0	37-161
Aptitude M	99.9	22.4	52-166	101.0	23.2	16-167
Criterion	38.4	7.3	12-60	43.3	7.1	18-60
Age	23.7	6.1	18-54	27.7	11.5	18-63
Education	12.4	1.0	10-16	12.4	1.1	9-17
Experience (months on current job)	23.2	19.3	1-99	35.6	41.0	1-240
Total Experience (months)	29.4	24.8	2-127	55.8	69.2	2-420

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APPENDIX 2

Geographic Distribution of Validation Sample

	Black Subsample	Total Sample
North	41	135
South	73	172
West	16	100
Total	130	407

Organizations Contributing Samples for Validation Study

North
Combined Insurance Company, Chicago, Illinois
Granite City Steel Company, Granite City, Illinois
Detroit Mutual Insurance Company, Plymouth, Michigan
Insurance Company of North America, Detroit, Michigan
University of Michigan, Ann Arbor, Michigan
Wayne State University, Detroit, Michigan
The St. Paul Insurance Companies, St. Paul, Minnesota
American Optical Corporation, Kansas City, Missouri
Overland Associated Mortgage Company, Kansas City, Missouri
Blue Cross of Eastern Ohio, Inc., Youngstown, Ohio
Legal Aid Society of Cleveland, Cleveland, Ohio
New York Life Insurance Company, Philadelphia, Pennsylvania
Bryant College, Smithfield, Rhode Island
Providence College, Providence, Rhode Island
Roger Williams College, Bristol, Rhode Island
Allis-Chalmers, Milwaukee, Wisconsin
Harnishfleger Corp., Milwaukee, Wisconsin
Joseph Schlitz Brewing Company, Milwaukee, Wisconsin
L. M. Berry Company, Milwaukee, Wisconsin
Menominee County, Keshena, Wisconsin
Milwaukee YWCA, Milwaukee, Wisconsin

South
Prudential Insurance Company, Jacksonville, Florida
Department of Economic Security, Frankfort, Kentucky
Sears Town, Monroe, Louisiana
American Airlines, Tulsa, Oklahoma
National Life and Accident Insurance, Nashville, Tennessee
Texas Tech University, Lubbock, Texas
Columbia Gas Company of West Virginia, Wheeling, West Virginia

McJunkin Supply Company, Charleston, West Virginia
Morris Plan Bank, Wheeling, West Virginia
West Virginia Department of Highways, Charleston, West Virginia
Wheeling Dollar Bank, Wheeling, West Virginia
Wheeling Pittsburgh Steel, Wheeling, West Virginia

West
Alaska Native Health Area Hospital, Anchorage, Alaska
Apache Powder Company, Benson, Arizona
Metropolitan Water District of Southern California, Los Angeles, California
City of Aurora, Aurora, Colorado
City of Longmont, Longmont, Colorado
Southwest Gas Corp., Las Vegas, Nevada
Portland General Electric Company, Portland, Oregon
State of Oregon Public Welfare Division, various cities in Oregon

Organizations Contributing Samples for Cross-validation Sample #1

C. A. Reed Company, Williamsport, Pennsylvania
H. Snellenberg & Company, Philadelphia, Pennsylvania
Planters Nut & Chocolate Company, Wilkes-Barre, Pennsylvania
Sylvania Electric Company, Williamsport, Pennsylvania
Teleflex Incorporated, North Wales, Pennsylvania

Organizations Contributing Samples for Cross-validation Sample #2

Albert Lea Public Schools, Albert Lea, Minnesota
Duluth Vocational-Technical School, Duluth, Minnesota
Globe Business School, St. Paul, Minnesota
Jackson Vocational-Technical School, Jackson, Minnesota
Minneapolis Vocational-Technical School, Minneapolis, Minnesota
St. Cloud Vocational-Technical School, St. Cloud, Minnesota
Winona Vocational-Technical School, Winona, Minnesota

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APPENDIX J

DESCRIPTIVE RATING SCALE

for Validation Sample

SCORE _____

RATING SCALE FOR _____

D.O.T. Title and Code

Directions: Please read the "Suggestions to Raters" and then fill in the items which follow. In making your ratings, only one box should be checked for each question.

SUGGESTIONS TO RATERS

We are asking you to rate the job performance of the people who work for you. These ratings will serve as a "yardstick" against which we can compare the test scores in this study. The ratings must give a true picture of each worker or this study will have very little value. You should try to give the most accurate ratings possible for each worker.

These ratings are strictly confidential and won't affect your workers in any way. Neither the ratings nor test scores of any workers will be shown to anybody in your company. We are interested only in "testing the tests." Ratings are needed only for those workers who are in the test study.

Workers who have not completed their training period, or who have not been on the job or under your supervision long enough for you to know how well they can perform this work should not be rated. Please inform the test technician about this if you are asked to rate any such workers.

Complete the last question only if the worker is no longer on the job.

In making ratings, don't let general impressions or some outstanding trait affect your judgment. Try to forget your personal feelings about the worker. Rate only on the work performed. Here are some more points which might help you:

1. Please read all directions and the rating scale thoroughly before rating.

2. For each question compare your workers with "workers-in-general" in this job. That is, compare your workers with other workers on this job that you have known. This is very important in small plants where there are only a few workers. We want the ratings to be based on the same standard in all the plants.

3. A suggested method is to rate all workers on one question at a time. The questions ask about different abilities of the workers. A worker may be good in one ability and poor in another: for example, a very slow worker may be accurate. So rate all workers on the first question, then rate all workers on the second question, and so on.

4. Practice and experience usually improve a worker's skill. However, one worker with six months' experience may be a better worker than another with six years' experience. Don't rate one worker as poorer than another merely because of a lesser amount of experience.

5. Rate the workers according to the work they have done over a period of several weeks or months. Don't rate just on the basis of one "good" day, or one "bad" day or some single incident. Think in terms of each worker's usual or typical performance.

6. Rate only the abilities listed on the rating sheet. Do not let factors such as cooperativeness, ability to get along with others, promptness and honesty influence your ratings. Although these aspects of a worker are important, they are of no value for this study as a "yardstick" against which to compare aptitude test scores.

MA 7-66
Apr. 1973

NAME OF WORKER *(Print)* *(Last)* *(First)*

SEX: MALE_____ FEMALE_____

Company Job Title: _____

How often do you see this worker in a work situation?

- ☐ All the time.
- ☐ Several times a day.
- ☐ Several times a week.
- ☐ Seldom.

How long have you worked with this worker?

- ☐ Under one month.
- ☐ One to two months.
- ☐ Three to five months.
- ☐ Six months or more.

A. How much can this worker get done? (Worker's ability to make efficient use of time and to work at high speed.) (If it is possible to rate only the quantity of work which a person can do on this job as adequate or inadequate, use #2 to indicate "inadequate" and #4 to indicate "adequate.")

- ☐ 1. Capable of very low work output. Can perform only at an unsatisfactory pace.
- ☐ 2. Capable of low work output. Can perform at a slow pace.
- ☐ 3. Capable of fair work output. Can perform at an acceptable pace.
- ☐ 4. Capable of high work output. Can perform at a fast pace.
- ☐ 5. Capable of very high work output. Can perform at an unusually fast pace.

B. How good is the quality of work? (Worker's ability to do high-grade work which meets quality standards.)

- ☐ 1. Performance is inferior and almost never meets minimum quality standards.
- ☐ 2. Performance is usually acceptable but somewhat inferior in quality.
- ☐ 3. Performance is acceptable but usually not superior in quality.
- ☐ 4. Performance is usually superior in quality.
- ☐ 5. Performance is almost always of the highest quality.

C. How accurate is the work? (Worker's ability to avoid making mistakes.)

- ☐ 1. Makes very many mistakes. Work needs constant checking.
- ☐ 2. Makes frequent mistakes. Work needs more checking than is desirable.
- ☐ 3. Makes mistakes occasionally. Work needs only normal checking.
- ☐ 4. Makes few mistakes. Work seldom needs checking.
- ☐ 5. Rarely makes a mistake. Work almost never needs checking.

D. How much does the worker know about the job? (Worker's understandir g of the principles, equipment, materials and methods that have to do directly or indirectly with the work.)

- ☐ 1. Has very limited knowledge. Does not know enough to do the job adequately.
- ☐ 2. Has little knowledge. Knows enough to get by.
- ☐ 3. Has moderate amount of knowledge. Knows enough to do fair work.
- ☐ 4. Has broad knowledge. Knows enough to do good work.
- ☐ 5. Has complete knowledge. Knows the job thoroughly.

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E. How large a variety of job duties can the worker perform efficiently? (Worker's ability to handle several different operations.)

- ☐ 1. Cannot perform different operat ons adequately.
- ☐ 2. Can perform a limited number of different operations efficiently.
- ☐ 3. Can perform several different opera'ions with reasonable efficiency.
- ☐ 4. Can perform many different operations efficiently.
- ☐ 5. Can perform an unusually large variety of different operations efficiently.

F. Considering all the factors already rated, and only these factors, how good is this worker? (Worker's all-around ability to do the job.)

- ☐ 1. Performance usually not acceptable.
- ☐ 2. Perfo mance somewhat inferior.
- ☐ 3. A fairly proficient worker.
- ☐ 4. Performance usually superior.
- ☐ 5. An unusually competent worker.

Complete the following ONLY if the worker is no longer on the job.

G. What do you think is the reason this person left the job? (It is not necessary to show the official reason if you feel that there is another reason, as this form will not be shown to anybody in the company.)

- ☐ 1. Fired because of inability to do the job.
- ☐ 2. Quit, and I feel that it was because of difficulty doing the job.
- ☐ 3. Fired or laid off for reasons other than ability to do the job (i.e., absenteeism, reduction in force).
- ☐ 4. Quit, and I feel the reason for quitting was not related to ability to do the job.
- ☐ 5. Quit or was promoted or reassigned because the worker had learned the job well and wanted to advance.

RATED BY	TITLE	DATE
COMPANY OR ORGANIZATION	LOCATION (*City, State, ZIP Code*)	

MA 7-66
Apr. 1973

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Descriptive Rating Scale

for Cross-Validation Sample #1

SP-20
11/56

SUGGESTIONS TO RATERS

We are asking you to rate the job performance of the people who work for you. These ratings will serve as a "yardstick" against which we can compare the test scores in this study. The ratings must give a true picture of each worker or this study will have very little value. You should try to give the most accurate ratings possible for each worker.

These ratings are strictly *confidential* and won't affect your workers in any way. Neither the ratings nor test scores of any worker will be shown to anybody in your company. We are interested only in "testing the tests." Ratings are needed only for those workers who are in the test study.

Workers who have not completed their training period, or who have not been on the job or under your supervision long enough for you to know how well they can perform this work should not be rated. Please inform the test technician about this if you are asked to rate any such workers.

In making ratings, don't let general impressions or some outstanding trait affect your judgment. Try to forget your personal feelings about the worker. Rate him only on the way he does his work. Here are some more points which might help you:

1. Please read all directions and the rating scale *thoroughly* before rating.

2. For each question compare your workers with "workers-in-general" in this job. That is, compare your workers with other workers on this job that you have known. This is very important in small plants where there are only a few workers. We want the ratings to be based on the same standard in all the plants.

3. A suggested method is to rate all workers on one question at a time. The questions ask about different abilities of the workers. A worker may be good in one ability and poor in another; for example, a very slow worker may be very accurate. So rate all workers on the first question, then rate all workers on the second question, and so on.

4. Practice and experience usually improve a worker's skill. However, one worker with six months' experience may be a faster worker than another with six years' experience. Don't rate one worker as poorer than another because he has not been on the job as long.

5. Rate the workers according to the work they have done over a period of several weeks or months. Don't rate just on the basis of one "good" day, one "bad" day or some single incident. Think in terms of each worker's usual or typical performance.

6. Rate only on the abilities listed on the rating sheet. Do not let factors such as cooperativeness, ability to get along with others, promptness and honesty influence your ratings. Although these aspects of a worker are important, they are of no value for this study as a "yardstick" against which to compare aptitude test scores.

Please fill in the information requested on the reverse side of this sheet.

Score_____

RATING SCALE FOR _____
D. O. T. Title and Code

Directions: Please read the sheet "Suggestions to Raters" and then fill in the items listed below. In making your ratings, only one box should be checked for each question.

Name of worker (print) _____ _____
(Last) (First)

Sex: Male _____ Female _____

Company Job Title: _____

How often do you see this worker in a work situation?

☐ See him at work all the time.

☐ See him at work several times a day.

☐ See him at work several times a week.

☐ Seldom see him in work situation.

How long have you worked with him?

☐ Under one month.

☐ One to two months.

☐ Three to five months.

☐ Six months or more.

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A. How much work can he get done? (Worker's ability to make efficient use of his time and to work at high speed.)

☐ 1. Capable of very low work output. Can perform only at an unsatisfactory pace.

☐ 2. Capable of low work output. Can perform at a slow pace.

☐ 3. Capable of fair work output. Can perform at an acceptable but not a fast pace.

☐ 4. Capable of high work output. Can perform at a fast pace.

☐ 5. Capable of very high work output. Can perform at an unusually fast pace.

B. How good is the quality of his work? (Worker's ability to do high-grade work which meets quality standards.)

☐ 1. Very poor. Does work of unsatisfactory grade. Performance is inferior and almost never meets minimum quality standards.

☐ 2. Not too bad, but the grade of his work could stand improvement. Performance is usually acceptable but somewhat inferior in quality.

☐ 3. Fair. The grade of his work is mediocre. Performance is acceptable but usually not superior in quality.

☐ 4. Good, but the grade of his work is not outstanding. Performance is usually superior in quality.

☐ 5. Very good. Does work of outstanding grade. Performance is almost always of the highest quality.

C. How accurate is he in his work? (Worker's ability to avoid making mistakes.)

☐ 1. Very inaccurate. Makes very many mistakes. Work needs constant checking.

☐ 2. Inaccurate. Makes frequent mistakes. Work needs more checking than is desirable.

☐ 3. Fairly accurate. Makes mistakes occasionally. Work needs only normal checking.

☐ 4. Accurate. Makes few mistakes. Work seldom needs checking.

☐ 5. Highly accurate. Rarely makes a mistake. Work almost never needs checking.

D. How much does he know about his job? (Worker's understanding of the principles, equipment, materials and methods that have to do directly or indirectly with his work.)

☐ 1. Has very limited knowledge. Does not know enough to do his job adequately.

☐ 2. Has little knowledge. Knows enough to "get by."

☐ 3. Has moderate amount of knowledge. Knows enough to do fair work.

☐ 4. Has broad knowledge. Knows enough to do good work.

☐ 5. Has complete knowledge. Knows his job thoroughly.

E. How much aptitude or facility does he have for this kind of work? (Worker's adeptness or knack for performing his job easily and well.)

☐ 1. Very low aptitude. Has great difficulty doing his job. Not at all suited to this kind of work.

☐ 2. Low aptitude. Usually has some difficulty doing his job. Not too well suited to this kind of work.

☐ 3. Moderate aptitude. Does his job without too much difficulty. Fairly well suited to this kind of work.

☐ 4. High aptitude. Usually does his job without difficulty. Well suited to this kind of work.

☐ 5. Very high aptitude. Does his job with great ease. Unusually well suited for this kind of work.

F. How large a variety of job duties can he perform efficiently? (Worker's ability to handle several different operations in his work.)

☐ 1. A very limited variety. Cannot perform different operations adequately.

☐ 2. A small variety. Can perform few different operations efficiently.

☐ 3. A moderate variety. Can perform some different operations with reasonable efficiency.

☐ 4. A large variety. Can perform several different operations efficiently.

☐ 5. An unusually large variety. Can do very many different operations efficiently.

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G. How resourceful is he when something different comes up or something out of the ordinary occurs? (Worker's ability to apply what he already knows to a new situation.)

☐ 1. Very unresourceful. Almost never is able to figure out what to do. Needs help on even minor problems.

☐ 2. Unresourceful. Often has difficulty handling new situations. Needs help on all but simple problems.

☐ 3. Fairly resourceful. Sometimes knows what to do, sometimes doesn't. Can deal with problems that are not too complex.

☐ 4. Resourceful. Usually able to handle new situations. Needs help on only complex problems.

☐ 5. Very resourceful. Practically always figures out what to do himself. Rarely needs help, even on complex problems.

H. How often does he make practical suggestions for doing things in better ways? (Worker's ability to improve work methods.)

☐ 1. Never. Sticks strictly with the routine. Contributes nothing in the way of practical suggestions.

☐ 2. Very seldom. Slow to see new ways to improve methods. Contributes few practical suggestions.

☐ 3. Once in a while. Neither quick nor slow to see new ways to improve methods. Contributes some practical suggestions.

☐ 4. Frequently. Quick to see new ways to improve methods. Contributes more than his share of practical suggestions.

☐ 5. Very often. Extremely alert to see new ways to improve methods. Contributes an unusually large number of practical suggestions.

I. Considering all the factors already rated, and only these factors, how satisfactory is his work? (Worker's "all-around" ability to do his job.)

☐ 1. Definitely unsatisfactory. Would be better off without him. Performance usually not acceptable.

☐ 2. Not completely satisfactory. Of limited value to the organization. Performance somewhat inferior.

☐ 3. Satisfactory. A fairly proficient worker. Performance generally acceptable.

☐ 4. Good. A valuable worker. Performance usually superior.

☐ 5. Outstanding. An unusually competent worker. Performance almost always top notch.

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APPENDIX 4

S-329R74

Clerk, General Office (clerical) 219.388

JOB DUTIES

Performs a wide range of clerical duties:

Maintains files: Sorts, arranges and files alphabetically, numerically, chronologically or by subject matter; locates and removes material from file upon request; prepares necessary chargeout records.

*Uses a typewriter to perform various duties: Types letters and reports, fills in forms and cuts stencils from longhand or typewritten copy; types names and addresses on envelopes, cards and labels; checks work for errors.

*Prepares and checks reports, bills, statements and invoices from original orders, sales charge slips or other records: Uses adding machine to add and subtract figures; operates a calculating machine to add, subtract, multiply and divide; writes computed answer on records or reports; enters customer's name, address, account and/or order number, items, prices, discounts and totals on printed form. May calculate figures on pay records. May insert bills in envelopes. Checks work for errors.

Performs miscellaneous clerical duties: May take notes or make verbatim records and transcribe material in prescribed form using a typewriter. Gives information requested by persons calling or coming into office. Keeps a continuous record of supplies and/or equipment received or issued; lists items to be ordered; may make periodic physical counts of stock. Opens mail, stamps time received on mail, reads and sorts incoming mail, and delivers mail to proper person or department.

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*These job duties are designated as critical job duties since they must be performed competently if the job is to be performed in a satisfactory manner. General Office Clerks spend about 75% of their working time performing these duties.

GPO 884-937